3;1730 (1126, 1127, 1129)
6.9417
9.9840

S/033/61/038/002/009/011
E032/E414

AUTHORS: Kuz'min, A.D., Salomonovich, A.Ye. and Udal'tsov, V.A.

TITLE: On the Radio Emission of the Planetary Nebulae NGC 6853 and NGC 7293

PERIODICAL: Astronomicheskiy zhurnal, 1961, Vol.38, No.2, pp.373-375

TEXT: The present authors have made an attempt to detect the radio emission of NGC 6853 and NGC 7293 on 9.6 cm. The NGC 6853 nebula was examined at the end of 1958 with the 31 m radio-telescope of the Krymskaya stantsiya (Crimean Station) of FIAN. The above radiotelescope has been described by V.V.Vitkevich and V.A.Udal'tsov (Ref.2) and the radiometer has been described by A.D.Kuz'min and V.A.Udal'tsov (Ref.3). The radiometer had a sensitivity of 0°.5 at a time constant of 20 sec. It is estimated that the flux density of radio emission due to the NGC 6853 nebula on 9.6 cm must be less than 4×10^{-26} W m^{-2} cps^{-1}. The NGC 7293 nebula was examined with the 22 m radiotelescope of FIAN at the beginning of 1960. This radiotelescope has been described by A.Ye.Salomonovich (Ref.4). It is estimated that the

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On the Radio Emission ...

flux density for the above two nebulae on 9.6 cm turns out to be at least by an order of magnitude lower than that reported by F.D.Drake and H.T.Ewen (Ref.1) on 3.75 cm. Since the accuracy of the present results is said to be higher by an order of magnitude than the results reported by Drake and Ewen, it is suggested that the latter are incorrect. Using the upper limits for the flux density, the present authors estimated the emission measure ME, the electron density n and the mass M of the above two planetary nebulae. These three quantities are estimated from the following formulae

$$ME = 38 \cdot 10^{26} p \varphi^{-2}; \quad (1)$$

$$n = \frac{48}{\varphi} \sqrt{\frac{P \cdot 10^{26}}{R\varphi}} \quad (2)$$

$$\frac{M}{M_\odot} = 4.8 \cdot 10^{-6} \varphi R^2 \sqrt{\varphi R p \cdot 10^{26}}, \quad (3)$$

where φ is the angular diameter of the source in fractions of a degree and R is the distance in parsecs. These formulae are

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On the Radio Emission ...

taken from G.Westerhout's paper (Ref.5). The estimates are summarized in the table. The angular dimensions of the nebulae which are quoted in the table are taken from B.A.Borontsov-Vel'yaminov's paper (Ref.6). The distances are taken from the latter paper and from the paper by I.S.Shklovskiy (Ref.7). There are 1 figure, 1 table and 7 references: 5 Soviet and 2 non-Soviet.

ASSOCIATION: Fizicheskiy in-t im. P.N.Lebedeva
Akademii nauk SSSR
(Physical Institute imeni P.N.Lebedev,
Academy of Sciences USSR)

SUBMITTED: June 7, 1960

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On the Radio Emission ...

S/033/61/038/002/009/011
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1 - angular dimensions
2 - distance, pc
3 - ME, cm^{-6} pc

Table

Таблица

	(1) Угловые размеры	(2) Расстояние пс	n, $см^{-3}$	M/M⊙	(3) ME, $см^{-6}$пс
NGC 7293	12'×15'	180 [6] 50 [7]	<110 <210	<0.75 <0.03	$<10^4$
NCG 6853	4'× 8'	300 [6] 150 [7]	<175 <250	<0.5 <0.09	$<2.3\cdot10^4$

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3,1720 (1041, 1126, 1127)

32438
S/033/61/038/006/007/007
E133/E435

AUTHORS: Kuz'min, A.D., Salomonovich, A.Ye.

TITLE: Radio observations of Venus in 1961

PERIODICAL: Astronomicheskiy zhurnal, v.38, no.6, 1961, 1115-1117

TEXT: Observations of Venus were made with the 22 m radio-telescope at wavelengths of 4 mm (Ref.2: A.G.Kizlyakov, A.D.Kuz'min, A.Ye.Salomonovich, Izv. vuzov, Radiofizika, v.4, no.3, 1961, 573), 8 mm and 9.6 cm (Ref.8: A.H.Barrett, Astrophys. J., v.133, no.1, 1961, 281) from the middle of March to the beginning of June 1961. Observations were also made at 3.3 cm from the end of May to the middle of July. At 4 and 8 mm, and at 3.3 cm, the brightness temperature increased continuously with the area of disc illuminated. The minimum temperatures found were 390 ± 120°K at 4 mm and 374 ± 75°K at 8 mm. These occurred before inferior conjunction. At 9.6 cm, the brightness temperature changed irregularly from day to day by large amounts. The brightness temperature averaged over the disc was also greater than at the shorter wavelengths being about 680°K. In agreement with American measurements (Ref.4: C.H.Mayer, T.P.McCullough,

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...ect and
...mponent of
...osphere of Venus. The
...ed at this wavelength was
...high electron density ($\approx 5 \times 10^8$ cm^{-3}).

Radio observations of Venus ...

With a magnetic field 1/30 that of the Earth (Ref.7: D.E.Jones, Planetary and Space Sci., v.5, no.2, 1961, 166) this could be obtained from solar corpuscular streams. More improbably, it could be produced from meteor streams, but these would have to be 3 to 4 orders of magnitude greater than on the Earth. The observations at the 4 mm wavelengths were carried out by the Aspirant of NIRFI, A.G.Kislyakov with the apparatus developed at NIRFI. There are 10 references: 4 Soviet and 6 non-Soviet-bloc. The four most recent references to English language publications Ref. 4,5,7 and 8 are quoted in the text.

4

ASSOCIATION: Fizicheskiy in-t im. P.N.Lebedeva, Akademii nauk SSSR
(Physics Institute im. P.N.Lebedev, AS USSR)

SUBMITTED: September 15, 1961

Card 3/3

27875

S/020/61/140/001/011/024
B104/B109

3.1720

AUTHORS: Kuz'min, A. D., and Salomonovich, A. Ye.

TITLE: The 8-mm radio-emission from the Taurus-A region

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 140, no. 1, 1961, 81-83

TEXT: In March and April, 1961, the authors systematically investigated the discrete source of 8-mm radio-emission from the Taurus-A region with the 22-m radiotelescope (directional diagram approximately 2mm, sensitivity 1.5° K) of the Fizicheskiy institut im. P. N. Lebedeva AN SSSR (Physics Institute imeni P. N. Lebedev AS USSR). This radio-emission was observed for the first time on August 21, 1959. Measurements were carried out with a fixed antenna, the direction of which was adjusted according to the radio-emission of Venus. The records of 21 measurements were averaged. Two sources of radio-emission were found, the first of which is well known. Its right ascension is $\alpha_{1950} = 5^{h}31^{m}35^{s} \pm 05^{s}$. The mean antenna temperature of this source is 4.5°K ± 10%, its apparent diameter is

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B104/B109

The 8-mm radio-emission from...

estimated at 4.5 ± 1'. The radiation density is estimated to be 500.10^{-16} $w.m^{-2}.cps^{-1}$ ± 2.5 %. Luminance temperature is 6°K ± 10 %. In all measurements, a second radiation source was found. The right ascension of this new source is $\alpha_{1950} = 5^h32^m10^s \pm 6^s$. Its apparent diameter is 2'30", and its antenna temperature is 2.8°K ± 10 %. The luminance temperature of the new source is estimated to be 7°K ± 25 % and its radiation density at 130.10^{-26} $w.m^{-2}.cps^{-1}$ ± 25 %. As there are no data available on any centimeter, decimeter, or meter radio-emission from this region, the authors assume this 8-mm radio-emission to be of thermal origin. The intensity of the new source discovered is ME = $2.7.10^6$. The absence of visible optical nebulae is taken as an indication that the visible intensity does not exceed 400. Therefore, the total absorption from the earth to the source is higher than 8^m7. Using data of P. P. Parenago (Astr. zhurn., 22, no. 1-3, 200 (1945)), the distance between the earth

Card 2/3

SALOMONOVICH, A. Ye.

BOBROV, M. S., Astronomical Council, Academy of Sciences USSR /1960/- "Optics and geometry in the matter of Saturn's rings"

PROKOF'YEV, Vladimir K., Crimean Astrophysical Laboratory imeni G. A. Shayn /1962/- "On the presence of oxygen in the atmosphere of Venus"

SALOMONOVICH, A. Ye., Physics Institute imeni P. N. Lebedev, Academy of Sciences USSR, and KUZ'MIN, Arkadiy D., Radio Astronomy Laboratory, Physics Institute imeni P. N. Lebedev, Academy of Sciences USSR - "Observations of the radioemission of Venus and Jupiter on the wave of 8 mm."

SALOMONOVICH, A. Ye., KUZ'MIN, Arkadiy D., and KISLYAKOV, A. G. - "Radioemission of Venus on the wave of 4 mm."

SALOMONOVICH, A. Ye., KUZ'MIN, Arkadiy D., RIKHNOVA, V. P., and SHAVLOVSKIY, I. V. - "Observations of the radioemission of Venus and Jupiter on the wave of 3.3 cm."

SALOMONOVICH, A. Ye., and KUZ'MIN, A. D. - "Radioemission of Venus on the wave of 9.6 cm."

SALOMONOVICH, A. Ye., and KUZ'MIN, A. D. - "Results of the observations of radioemission of Venus in 1961"

SHARONOV, Vsevolod V., Director, Astronomical Observatory, Leningrad State University /1961 position/- "Probable state of the surface and atmosphere of the planet Mars according to photometric and colorimetric data"

VSEKHSVYATSKIY, Sergey K., Head of the Chair of Astronomy, Kiev State University /1961 position/- "Nature of Saturn's rings and signs of the existence of a ring around Jupiter"

YEZERSKIY, V. I., and BARABASHEV, N. P., Director, Kharkov Astronomical Observatory, Kharkov State University /1960 position/- "Optical properties of the atmosphere and surface of Mars according to photometric and spectrophotometric observations carried out at the Kharkov University Observatory"

port to be submitted for the 11th Intl. Astrophysics Symposium, Belgian st. of Astrophysics, Cointe-Sclessin, Belgium, 9-11 Jul 1962.

43833

S/504/62/017/000/001/007
I046/I246

3.1710

AUTHORS: Kalachev, P.D. and Salomonovich, A. Ye.

TITLE: The radiotelescope with the 22-meter reflector

SOURCE: Akademiya nauk SSSR. Fizicheskiy institut. Trudy, v. 17. Moscow, 1962. Radioastronomiya, 13-41

TEXT: The author reviews the design, the mounting and the adjustment of the 22-m radio-telescope of the Fizicheskiy institut AN SSSR (Physical Institute AS USSR). The total weight of the telescope is 463 tons, the maximum height is 26.7 m. The reflecting surface is manufactured of 6 mm aluminum sheets. For azimuthal centering, the telescope can be rotated slowly, at a rate of 1 revolution per 24 hours, or rapidly, at a rate of 18 degrees per minute; for position centering, the telescope can be rotated at a rate of 1 revolution per 24 hours or at a rate of 25.5 degrees per minute. The instrument is suitable for operation in a wide range of centimeter waves, starting with $\sim$1 cm. On uniform heating by $\pm 25^{\circ}$, the focal distance of the reflecting paraboloid changes by no more than ± 3.5 mm. There are 23 figures.

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43834

3/504/62/017/000/002/007
I046/I246

AUTHOR: Salomonovich, A.Ye.

TITLE: Some results of investigations carried out on the PT-22 (RT-22) radiotelescope

SOURCE: Akademiya nauk SSSR. Fizicheskiy institut. Trudy, v. 17. Moscow, 1962. Radioastronomiya, 42-83

TEXT: The analysis of the radioimages of the Sun recorded daily throughout June 1959 with the PT-22 (RT-22) radiotelescope (a 22 m paraboloid) on 0.8, 2.0 and 3.2 cm radiowaves shows that regions of enhanced radiobrightness appear over large sun-spot groups and are apparently emissions of coronal condensations. The radiation flux densities of local sources measured on the three wavelengths are almost equal to one another, this being an indication of the thermal origin of local radioemissions on the Sun. The 0.8, 2.0 and 3.2 cm radioemission of solar sources is circularly polarized. The radio-observations of the Moon carried out on this telescope in 1959 and 1960 show that the latitudinal distribution of temperature varies as $\sqrt{\cos\psi}$, and that the average brightness

Card 1/2

Some results of investigations...

temperature at the center of the lunar disc is 230°K. Radiomeasurements on 0.8 and 2.0cm waves give quite low values for the effective dielectric constant of the lunar surface (1.5 to 2). The results point in favor of the one-layer model of the lunar surface setting its density at 0.5 g/cm^3. Tentative results obtained for Venus give some evidence in favor of the existence of an ionosphere (radiation in the decimeter range) and apparently rule out the high pressure and the abundance of water vapor in the venusian atmosphere (the temperatures measured on 0.4, 0.8 and 3.3 cm radiowaves are almost identical). In future, PT-22 will also be used in studies of the monochromatic radiation and the selective absorption of the Galaxy and the Metagalaxy and in investigation of the proper radiation, the absorption and the density fluctuation of the terrestrial atmosphere. There are 21 figures, and 2 tables.

Card 2/2

33425

S/033/62/039/001/009/013
E032/E514

3,2500 (1041, 1057, 1080)

AUTHOR: Salomonovich, A.Ye.

TITLE: Thermal radio emission of the moon in the centimetre range and some characteristics of its surface layer

PERIODICAL: Astronomicheskiy zhurnal, v.39, no.1, 1962, 79-86

TEXT: The author reviews published data on lunar radio emission and in particular the results obtained with the 22 m radio telescope of FIAN. The latter results were reported by the author et al. (Ref.3: Astron.zh. (in press); Ref.9: Izv.vyssh. uch.zav., Radiofizika, 4, No.4, 591, 1961; Ref.12: Ibid (in press); Ref.13: Ibid, 4, No.3, 425, 1961). The aim of the review was to determine the characteristics of the surface layer of the moon which is responsible for the radio emission. The FIAN observations were carried out in 1959-1960 on 9.6, 3.2, 2 and 0.8 cm. These observations have been used to obtain the radio brightness distribution over the visible lunar disc. A systematic displacement along the lunar equator was found for the region of maximum radio brightness at 3.2, 2 and 0.8 cm. This displacement depends on the phase. A further effect is a reduction in the brightness

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Thermal radio emission ...

temperature towards the poles. The two-dimensional distributions on 2 and 0.8 cm were used to construct the relative emissive power of the moon as a function of the longitude along the equator. These and other results are said to suggest that the dielectric constant of the surface layer lies between 1 and 2. It is found that on 2 cm the reduction in the surface temperature towards the poles is approximately $\cos^{1/2}\Psi$, where Ψ is the latitude. In the case of 0.8 cm it was not possible to distinguish between $\cos\Psi$ and $\cos^{1/2}\Psi$. This again confirms that the dielectric constant lies between 1 and 2. These data are then used to estimate the emissive power which turns out to be very high, i.e. of the order of 0.99. Finally, a calculation is made of the ratio of the depth of penetration of the electromagnetic and thermal waves using the theory of V. S. Troitskiy (Ref.21: Astron. zh., 31, 511, 1954). It is shown that for $\lambda > 1$ cm this ratio is equal to 2λ, while at 0.8 cm it is equal to 2.5λ. Since it was found that Jaeger's curves (Ref 23: Austral J. Phys., 1, 10, 1953) cannot be made to agree with observations, his non-linear equations were solved again by numerical integration and it was found that

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33425

Thermal radio emission ... S/033/62/039/001/009/013
E032/514

agreement with experiment can be obtained with a single-layer model provided that $(k\rho c)^{1/2} < 10^3$ (k - thermal conductivity, ρ - density, c - specific heat). A probable value is said to be $(k\rho c)^{-1/2} = 600\text{-}700$. The small value of the effective dielectric constant indicates that the surface layer has a low density which appears to decrease towards the surface. There are 4 figures, 2 tables and 26 references: 12 Soviet-bloc and 14 non-Soviet-bloc. The four latest English-language references read as follows: Ref.1: R. J. Coates, Paper presented at the Amer. Astron.Soc. Meeting at Toronto, Canada, IX, 1959; Ref.5: J. E. Gibson, Proc. Inst. Rad. Eng., 46, 280, 1958; Ref.16: P. G. Mezger, H. Strassl, Plan. Sp. Sci., 1, 213, 1959; Ref.25: J. B. Irwin, Sky and Telescope, 19, 347, 1960.

ASSOCIATION: Fizicheskiy in-t im. P. N. Lebedeva Akademii nauk SSSR (Physics Institute imeni P. N. Lebedev, Academy of Sciences USSR)

SUBMITTED: January 20, 1961

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37392
S/033/62/039/002/004/014
E032/E514

3.1720

AUTHOR: Salomonovich, A.Ye.

TITLE: On the radio emission of the sun at a wavelength of 8 mm

PERIODICAL: Astronomicheskiy zhurnal, v.39, no.2, 1962, 260-269

TEXT: In 1957/58 the present author et al. carried out an extensive series of observations of 8 mm solar radio emission (Ref.7: Byul. Solnechnyye dannyye, No.9, 83, 1959). However, the resolution of the radio telescope was inadequate (beamwidth 18' at 3 db) so that a brightness temperature distribution and its relation to other solar phenomena could not be established. In June, 1959 a further series of experiments were begun using the 22 m steerable radio telescope of the Physics Institute imeni P. N. Lebedev (Ref.9: Radiotekhnika i elektronika, 12, 2092, 1959). The resolution of the latter telescope is better by a factor of 10 as compared with the telescope used previously. Two-dimensional temperature distributions on the solar disc were obtained. Enhanced radiation was noted from the regions above large sunspot groups (Sp $\geqslant$ 100). These were apparently due to coronal ...tio

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condensations. The angular dimensions of the most active regions (Sp > 300 to 500) was found to be 1'-2'. There was also enhanced emission from more extended regions whose dimensions approach 4 to 5'. The brightness temperature of these regions above the quiet sun level was found to reach 2500-6000°K. Regions with enhanced emission were identified with optically active solar regions and the development of ten such regions was studied. Simultaneous measurement at 8 mm and 3.2 cm showed that the flux density at both wavelengths is roughly the same, showing that the sources are probably of thermal origin and optically thin at these wavelengths. Bursts of radio emission were found at 8 mm. The onset of these bursts was simultaneous with chromospheric flares. The angular dimensions of the bursts and the maximum brightness temperatures are estimated (10^4 - 10^6 °K). The results of observations of local sources are in excellent agreement with the 20 cm observations reported by Christiansen and Mathewson in Ref.17 (Paris Symposium on Radio Astronomy). Further simultaneous observations at a number of wavelengths in the centimetre range are recommended. They should throw light on the nature of flares and the mechanism responsible for bursts of radio emission.

On the radio emission ... S/033/62/039/002/004/014
E032/E514

There are 4 figures and 1 table.

ASSOCIATION: Fizicheskiy in-t im. P. N. Lebedeva Akademii nauk SSSR
(Physics Institute imeni P. N. Lebedev Academy of Sciences USSR)

SUBMITTED: December 24, 1960

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38479
S/033/62/039/003/001/010
E032/E114

3,1720

AUTHORS: Kislyakov, A.G., Kuz'min, A.D., and Salomonovich, A.Ye.

TITLE: The radio emission of Venus at 4 mm wavelength

PERIODICAL: Astronomicheskiy zhurnal, v.39, no.3, 1962, 410-417

TEXT: The intrinsic radio emission of Venus is expected to yield important information on the temperature of the planet, on the nature of its surface, on the composition of its atmosphere and on some of its rotational properties. All previous measurements are said to have been carried out at wavelengths greater than 0.8 cm. In March - May, 1961, the 22-metre radio telescope of the Fizicheskiy institut imeni P.N. Lebedeva AN SSSR (Physics Institute imeni P.N. Lebedev, AS USSR) was used to observe the radio emission of Venus at 4 mm. An account of the method of reduction of the observations is given and it is estimated that the RMS error in the measured intensity was ± 30%. The results obtained are shown in Figs. 4 and 5. (Fig.4: Antenna temperature as a function of time; the arrow indicates inferior conjunction. Fig.5: Brightness temperature of Venus as a function of time).

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S/033/62/039/003/001/010
The radio emission of Venus at ... E032/E114

At the inferior conjunction the relative area of the illuminated disc was 0.007, whereas at the end of the observations it was 0.34. Since the antenna parameters were not known with sufficient accuracy, the only conclusion that may be drawn as regards phase dependence of the temperature is that the temperature difference for these two days did not exceed 230 °K. There are 6 figures.

ASSOCIATION: Fizicheskiy in-t im. P.N. Lebedeva Akademii nauk SSSR (Physics Institute imeni P.N. Lebedev, AS USSR).

Radiofizicheskiy in-t Gor'kovskogo gos. universiteta im. N.I. Lobachevskogo (Radiophysics Institute of the Gor'kiy State University imeni N.I. Lobachevskiy)

SUBMITTED: November 29, 1961

Card 2/2

KUZ'MIN, A.D.; SALOMONOVICH, A.Ye.

Observations of radio emissions of Venus and Jupiter on 8 mm. wavelength. Astron.zhur. 39 no.4:660-668 Jl-Ag '62. (MIRA 15:7)

1. Fizicheskiy institut imeni P.N.Lebedeva AN SSSR.
(Venus (Planet)) (Jupiter (Planet)) (Radio astronomy)

SALOMONOVICH, A.Ye.; LOSOVSKIY, B.Ya.

Observations of radio brightness distribution on the lunar disk at the 0,8 cm.wavelength. Astron.zhur. 39 no.6:1074-1082 N-D '62. (MIRA 15:11)

1. Fizicheskiy institut im. P.N. Lebedeva AN SSSR.
(Radio astronomy)
(Moon)

BIBINOVA, V.P.; KUZ'MIN, A.D.; SALOMONOVICH, A.Ye.; SHAVLOVSKIY, I.V.

Observations of the radio emission of Venus and Jupiter at the 3,3 cm.wavelength. Astron.zhur. 39 no.6:1083-1088 N-D '62. (MIRA 15:11)

1. Fizicheskiy institut im. P.N. Lebedeva AN SSSR.
(Radio astronomy) (Venus (Planet))
(Jupiter (Planet))

S/053/62/077/004/001/006
B117/B101

AUTHOR: Salomonovich, A. Ye.

TITLE: Optics of millimeter waves and radioastronomy

PERIODICAL: Uspekhi fizicheskikh nauk, v. 77, no. 4, 1962, 589 - 596

TEXT: This appreciation was given at a conference held on March 12, 1962 in the Fizicheskiy institut im. P. N. Lebedeva AN SSSR (Physics Institute imeni P. N. Lebedev AS USSR) on the occasion of the 50th anniversary of P. N. Lebedev's death. The role Lebedev played in the development of wave optics was pointed out and the precise devices he designed for the examination of electromagnetic millimeter waves were briefly discussed. The original devices for conducting the Hertzian experiment on a 6 mm wave are in possession of the Physics Institute imeni P. N. Lebedev. The great importance of centimeter and millimeter waves in radioastronomy was stressed, especially now that it has become possible for such studies to be pursued also outside the earth's atmosphere. Further it was remarked that P. N. Lebedev's work on light pressure as well as on millimeter waves lie at the basis of the present development and great future promise of radiophysics.

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S/053/62/077/004/001/006
B117/B101

Optics of millimeter waves ...

There are 5 figures.

Card 2/2

KUZ'MIN, A.D.; SALOMONOVICH, A.Ye.

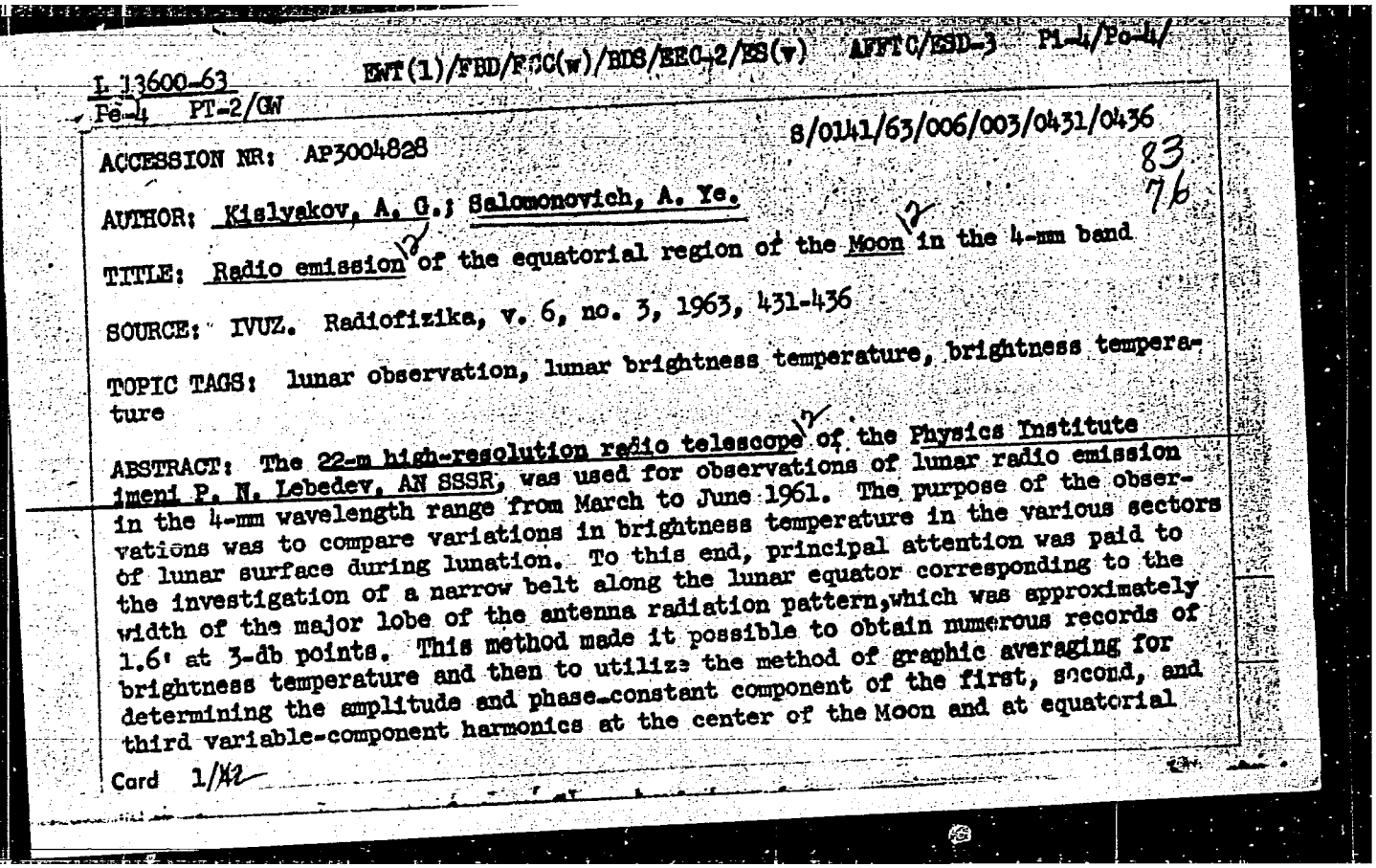
Radio emission of discrete sources in orion and Omega in the microwave band. Astron.Tsir. no. 260:1-4 S '63. (MIRA 17:5)

1. Fizicheskiy institut imeni Lebedeva AN SSSR.

KISLYAKOV, A.G.; LOSOVSKIY, B.Ya.; SALOMONOVICH, A.Ye.

Radio emission of lunar "seas" and "continents" in the millimeter band. Izv. vys. uchab. zav.; radiofiz. 6 no.1:192-193 '63.
(MIRA 16:7)

1. Fizicheskiy institut im. P.N.Lebedeva AN SSSR.
(Moon--Observations) (Radio astronomy)



L 13600-63 EWT(1)/FBD/FCC(w)/BDS/EEC-2/ES(w) AFFTC/ESD-3 Pi-4/Po-4/
Fe-4 PT-2/GW

ACCESSION NR: AP3004828 S/0141/63/006/003/0431/0436

AUTHOR: Kislyakov, A. G.; Salomonovich, A. Ye.

TITLE: Radio emission of the equatorial region of the Moon in the 4-mm band

SOURCE: IVUZ. Radiofizika, v. 6, no. 3, 1963, 431-436

TOPIC TAGS: lunar observation, lunar brightness temperature, brightness temperature

ABSTRACT: The 22-m high-resolution radio telescope of the Physics Institute imeni P. N. Lebedev, AN SSSR, was used for observations of lunar radio emission in the 4-mm wavelength range from March to June 1961. The purpose of the observations was to compare variations in brightness temperature in the various sectors of lunar surface during lunation. To this end, principal attention was paid to the investigation of a narrow belt along the lunar equator corresponding to the width of the major lobe of the antenna radiation pattern, which was approximately 1.6' at 3-db points. This method made it possible to obtain numerous records of brightness temperature and then to utilize the method of graphic averaging for determining the amplitude and phase-constant component of the first, second, and third variable-component harmonics at the center of the Moon and at equatorial

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L 13600-63

ACCESSION NR: AP3004828

points at longitudes +32° and -47°. The nature of the variation in the amplitude of harmonics with the increase in their number made it possible to ascertain the correctness of the longitudinal distribution of lunar surface temperature in accordance with the $\sqrt{\cos \psi}$ law. Fig. 1 of the Enclosure shows the graphic distribution of brightness temperatures along the equator; Fig. 2 is a plot of the radio emission temperatures of various sectors of the equator. "The authors thank N. V. Serov, B. Ya. Losovskiy, V. S. Lazarevskiy, M. R. Zelinskaya, A. N. Ivannikova, and T. T. L'vova for their aid in the project." Orig. art. has: 3 figures, 2 tables, and 1 formula.

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva AN SSSR (Physics institute, AN SSSR); Nauchno-issledovatel'skiy radiofizicheskiy institut pri Gor'kovskom universitete (Scientific Research Institute of Radiophysics at Gor'ky University)

SUBMITTED: 29Aug62 DATE ACQ: 27Aug63 ENCL: 02

SUB CODE: AS, GE NO REF SOV: 015 OTHER: 001

Card 2/2

VETUKHNOVSKAYA, Yu.N.; KUZ'MIN, A.D.; KUTUZA, B.G.; LOSOVSKIY, B.Ya.; SALOMONOVICH, A.Ye.

Measuring the radio emission spectrum of the night side of Venus in the microwave band. Izv. vys. ucheb. zav.; radiofiz. 6 no.5: 1054-1056 '63. (MIRA 16:12)

1. Fizicheskiy institut imeni Lebedeva AN SSSR.

KUZ'MIN, A. D.; SALOMONOVICH, A. Ye.

Determination of the period and direction of the rotation of Venus from radio astronomical observations. Astron. zhur. 40 no.1:154-157 J-F '63. (MIRA 16:1)

1. Fizicheskiy institut im. P. N. Lebedeva AN SSSR.

(Venus(Planet))

KISLYAKOV, A.G.; SALOMONOVICH, A.Ye.

Radio emission of solar active regions in the millimeter wave range. Astron.zhur. 40 no.2:229-234 Mr-Ap '63. (MIRA 16:3)

1. Fizicheskiy institut im. P.N.Lebedeva AN SSSR i Nauchno-issledovatel'skiy radiofizicheskiy institut pri Gor'kovskom universitete.
(Sun) (Radio astronomy)

L 27392-65 EWT(d)/FBD/FSS-2/EWT(1)/EEC(k)-2/EWG(v)/EEC-4/EEC(t)/EEC(b)-2/EEC(z)-2/FCS(k) Pn-4/Pe-5/Pp-4/Pac-4/Pae-2/Pi-4/Pj-4/Pl-4 AST/GW/WS/WR

ACCESSION NR AM4043705 BOOK EXPLOITATION

S/ 80 59 0+1

Kus'min, A. D.; Salomonovich, A. YE.

Radio-astronomical methods of antenna parameter measurements (Radioastronomicheskiye metody izmereniy parametrov antenn), Moscow, "Sovetskoye radio", 1964, 183 p. illus., biblio., index. 5,600 copies printed.

TOPIC TAGS: radio astronomy, antenna directivity, solar radio emission, lunar radio emission, space communication, antenna pattern measurement

PURPOSE AND COVERAGE: This book provides a systematic presentation of the basic practical information required to measure antenna parameters using space sources of radio emission. The principles of radio astronomical observations, adjustment of the electrical axis of antennas, methods of plotting directivity diagrams, and methods of measuring amplification and attenuation factors are discussed. The book is intended for specialists in antenna technology and persons concerned with radio astronomy and the problem of space radio communication.

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ACCESSION NR AM4043705

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Ch. III. Principles of radio astronomical measurements -- 60
Ch. IIII. Adjustment of the electrical axis and measurement of antenna directivity -- 106
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SUBMITTED: 28Feb64 SUB CODE: EC, AA

NO REF SOV: 064 OTHER: 036

Card 2/2

ACCESSION NR: AP4024467 S/0141/64/007/001/0051/0058

AUTHOR: Salomonovich, A. Ye.

TITLE: Concerning the detection of water in the atmosphere of Venus

SOURCE: IVUZ. Radiofizika, v. 7, no. 1, 1964, 51-58

TOPIC TAGS: Venus, Venus atmosphere, atmosphere of Venus, Venus atmosphere water content, radio emission, radio brightness temperature, water absorption line, millimeter wave radio emission, spectral radioastronomy, hydrocarbon absorption line

ABSTRACT: The possible presence of water vapor and aqueous clouds in the atmosphere of Venus is reassessed in light of recent data on the radio emission from this planet. By assuming an atmosphere consisting of 20 per cent CO_2 and 80 per cent N_2 at a pressure of 90 mb, it is shown first that the radio-emission absorption observed below 3 cm cannot be attributed to the carbon dioxide. Further estimates of the hypothetical cloud layer capable of accounting for the brightness temperature observed at millimeter wavelengths leads to a

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ACCESSION NR: AP4024467

brightness vs. wavelength curve which approximates the observed data but still exhibits unaccounted for deviations which cannot be reconciled by modifying the assumed parameters of the surface of Venus and its clouds. It is also indicated that no appreciable dips in the radio-emission brightness temperature can be expected near the 13.5-mm water resonance line and that the possible presence of hydrocarbons (CH_2O, C_2H_2O, CH_2O_2) can lead to lines close to those of water. It is concluded that additional information can be obtained by spectral radioastronomy but that the available low-noise amplifiers have too narrow a bandwidth and the recorded antenna temperature of Venus may not be high enough for the conventional broadband amplifier. Orig. art. has: 4 figures and 7 formulas.

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva AN SSSR (Physics Institute, AN SSSR)

SUBMITTED: 03May63 DATE ACQ: 15Apr64 ENCL: 01

SUB CODE: AS, PH NO REF SOV. 009 OTHER: 015

Card 2/3

ACCESSION NR: AP4041030 S/0120/64/000/003/0119/0120

AUTHOR: Karachun, A. M.; Salomonovich, A. Ye.

TITLE: Standard source for calibrating SHF polarimeters

SOURCE: Pribory* i tekhnika eksperimenta, no. 3, 1964, 119-120

TOPIC TAGS: polarimeter, SHF polarimeter, polarimeter calibration

ABSTRACT: Two versions of a high-intensity nonpolarized-radiation standard are suggested. The first comprises two linearly polarized at right angles noncoherent sources (e.g., 2 gas-discharge noise tubes) connected to a circular waveguide at right angles to each other. The second version has one linearly polarized source whose radiation is turned into a nonpolarized by a ferrite rotator. A gas-discharge noise tube with a temperature of $(1.5-2)\times10^4$ K is suggested as a linearly polarized source. Such a source is intended for calibrating the polarimeters intended for measuring low polarizations. Orig. art. has: 1 figure

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L 18832-65 EWT(d)/FBD/FSS-2/EWT(l)/EEC(k)-2/EWG(v)/EEC-4/EEC(t)/ Pn-4/Pq-4
Pe-5/Pac-4/Pg-4/Pae-2/Pt-10/Pi-4/Pl-4 RAEM(a)/APETR/ESD/ASD(a)-5/AFTC(b)/AFWL/
SSD/ESD(gs)/ESD(t) JW/WS

ACCESSION NR: AP4040916 S/0109/64/009/006/1069/1073

AUTHOR: Salomonovich, A. Ye.; Braude, B. V.; Yesepkina, N. A.

TITLE: Measuring the parameters of pencil-beam antennas at close range

SOURCE: Radiotekhnika i elektronika, v. 9, no. 6, 1964, 1069-1073

TOPIC TAGS: antenna, pencil beam antenna, radio astronomy, cosmic radio communication

ABSTRACT: In modern antennas developed for radio-astronomical and cosmic-communication purposes, the ratio of the aperture linear dimensions to the wavelength is so great that conventional measurement methods become inapplicable. By combining the measuring methods that use cosmic sources with methods of close-range antenna tuning, the parameters of large-size antennas may be acceptably measured. The present article shows the possibility of measuring at close range the side lobes and gain of pencil-beam parabolic antennas having a

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ACCESSION NR: AP4040916 0

radiation pattern a few angular minutes wide. The radiation patterns of a paraboloid of rotation at close range and at long range are determined. It is found that the close-range pattern of a focused antenna is a sum of the long-range pattern and an additional term which is zero in the principal direction; this term decreases with an increase in range. The close-range pattern differs from the true pattern by λ / r_0; the latter for high-directional antennas is about 10^{-5}. Thus, by proper focusing, not only the major lobe but also minor lobes can be reliably measured at close range. Orig. art. has: 2 figures and 9 formulas.

ASSOCIATION: none

SUBMITTED: 04Dec63 ENCL: 00

SUB CODE: EC NO REF SOV: 011 OTHER: 000

Card 2/2

L 8806-65 EWT(1)/EWG(v)/ESC(t) Pe-5/Pae-2 RAEM(a)/RAEM(t) GW B

ACCESSION NR: AP4043956 S/0033/64/041/004/0707/0710

AUTHOR: Basharinov, A. Ye.; Vetukhnovskaya, Yu. N.; Kuz'min, A. D.; Kutuza, B. G.; Salomonovich, A. Ye

TITLE: Measurements of the brightness temperature on the illuminated side of Venus on the 8-mm wavelength

SOURCE: Astronomicheskiy zhurnal, v. 41, no. 4, 1964, 707-710

TOPIC TAGS: brightness temperature, 8 mm wavelength, radio emission, zenithal distance, signal attenuation, terrestrial atmosphere, illumination phase interior conjunction, opposite rotation

ABSTRACT: The brightness temperature of the illuminated side of Venus was measured on the 8-mm wavelength from November 1962 to October 1963. The brightness temperature of Jupiter was measured at the same time. The Venusian brightness temperature was computed by accepting the mean Jovian brightness temperature to be 140K. The Venusian brightness temperature computed from observation data obtained on 10—11 May, 22—26 July, and 2—3 October 1963, using the Jovian brightness temperature mentioned above, was 435±65K and 440±70K. Readings of radio emission from Venus and Jupiter were corrected for changes of noise, for

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L 8806-65
ACCESSION NR: AP4043956

zenithal distances of the planets, and for attenuation of signals in the terrestrial atmosphere. Observation data show an increase of Venusian brightness temperature with the increase of the illuminated disk. This increase, as was previously found out, confirms the dependence of the brightness temperature upon the illumination phase. The center of the minimum brightness temperature after the interior conjunction indicates that the rotation of Venus is the opposite of that of the Earth and Mars. Orig. art. has: 2 figures and 4 formulas.

ASSOCIATION: none

SUBMITTED: 00	ATD PRESS: 3106	ENCL: 00
SUB CODE: AA	NO REF SOV: 004	OTHER: 003

Card 2/2

L 24307-66 FBD/EWT(1) GW/WS-2

ACC NR: AR6005261 SOURCE CODE: UR/0058/65/000/009/H048/H048

AUTHORS: Kutuza, B. G.; Losovskiy, B. Ya.; Salomonovich, A. Ye.

TITLE: Measurement of the radio emission from Mercury at 8 mm wavelength

SOURCE: Ref. zh. Fizika, Abs. 9Zh336

REF. SOURCE: Astron. tsirkulyar, no. 327, 28 apr., 1965, 5-7

TOPIC TAGS: Mercury planet, radio astronomy, radio emission, millimeter wave propagation, electronic measurement, radio telescope

TRANSLATION: The authors present the results of measurements of the radio emission from Mercury at 8 mm wavelength, made in 1964 with the aid of a 22-meter radiotelescope. The results point to the presence of a connection between the brightness temperature averaged over the disc and the phase angle. Assuming that the distribution over the surface is given by $T_b = T_0 \cos^n \theta$ on the illuminated surface and by $T_b = 0$ on the non-illuminated surface of the planet, the

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L 24307-66

ACC NR: AR6005261

brightness temperature in the subsolar point $T_0 = 660 \pm 120$K for $n = 1/4$ and $T_0 = 540 \pm 85$K for $n = 0$. Within the limits of errors, this agrees with the results of calculations and measurements in the infrared band. S. Makarova.

SUB CODE: 03, 17

Card 2/2 FV

L 52382-65 FBD/EWT(1)/EWG(v)/EEC-4/EEC(t)/FCS(k) Pe-5/Pae-2/P1-4/Pj-4/P1-4
GW/WS-4/WR

ACCESSION NR: AT5012807 UR/2504/65/028/000/0100/0103

52
51
B+1

AUTHOR: Salomonovich, A. Ye.

TITLE: 8. A statistical evaluation of the effect of radiotelescope antenna accuracy and rigidity on its parameters

SOURCE: AN SSSR. Fizicheskiy institut. Trudy, v. 28, 1965. Radioteleskopy (Radio telescopes), 100-103

TOPIC TAGS: antenna distortion, antenna error, antenna effective area, antenna directionality, radiotelescope antenna

ABSTRACT: The directivity diagram, effective area, and other properties of antennas depend on the errors in their construction and various types of deformations. The effects due to these, mostly random, errors have been discussed earlier by numerous authors (see, e.g., J. Robieux, Ann. Radioelectr., 1956, 11, no. 43, 29; B. V. Braude, N. A. Yesepkina, N. L. Kaydanovskiy, S. E. Khaykin, Radiotekhnika i elektronika, 1960, 5, no. 4, 584; Ya. S. Shifrin, Statistika polya lineynoy antenny, 1962). However, during their use, antennas are further affected by gravitational, wind, and thermal interactions which further worsen their properties by introducing additional phase deformations of the field. These changes are usually quite even and generally vary in time. In this paper,

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L 52382-65

ACCESSION NR: AT5012807

similarly to the case of random production errors, the author considers these exploitation-induced errors as time dependent random deformations. Using the results of the above-quoted papers, he applies a statistical treatment to the random deformations bounded by a maximum deformation fixed by the dispersion of phases and the radius of correlations. The theoretical deductions are compared with the experimental determinations of various parameters of the parabolic antenna of the RT-22 radiotelescope (A. Ye. Salomonovich, B. V. Braude, N. A. Yesepkina, Trudy FIAN, 1964, 28, 116; P. D. Kalachev, Trudy FIAN, 1964, 28, 183-203; 204-216). The results showed good agreement between the experimental data and the theoretical predictions. Orig. art. has: 9 formulas.

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva Akademii nauk SSSR (Physics Institute of the Academy of Scineces, SSSR)

SUBMITTED: 00 ENCL: 00 SUB CODE: AA

NO REF SOV: 007 OTHER: 001

Card 2/2

L 50346-65 FBD/EWT(1)/EWG(v)/EEC-4/EEC(t)/FCS(k) Pe-5/Pae-2/P1-4/PJ-4/
P1-4 GW/WS-2/WR

ACCESSION NR: AT5012808 UR/2504/65/028/000/0104/0115 48 46 B+1

AUTHOR: Kalachev, P.D.; Salomonovich, A. Ye. 25B

TITLE: 9. Increasing the effective area of radio telescope antennas by reducing the scattering on the braces

SOURCE: AN SSSR. Fizicheskiy institut. Trudy, v. 28, 1965. Radioteleskopy (Radio telescopes), 104-115

TOPIC TAGS: radio telescope antenna, effective antenna area, mirror support scattering, scattering power loss

ABSTRACT: The effects of the edge and braces on the effective antenna area were studied in several earlier papers (see, e.g., A.I. Potekhin, Sov. radio, 1948). However, the calculations refer exclusively to the case when the braces lean on the edge of the reflector. The present paper discusses the effects on real, large radio telescopes. Theoretical estimates show that (within a probable accuracy of 10%) the total power losses are as high as 19.7% and are due to the mirror end scattering (2.9%), irradiator scattering (2.8%), plane wave-brace scattering (3.8%), and spherical wave-brace scattering (10.2%). These losses may be reduced sharply if one uses a multi-mirror system and separates the mirror from the rest of the antenna in such a way that the exposed supporting structure

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L 50346-65

ACCESSION NR: AT5012808

carries only the secondary re-emitting mirror; a decrease in the size of the braces automatically reduces the amount of the scattering. The laboratory of radio astronomy of the FIAN designed and constructed an experimental antenna (described briefly in the article) whose scattering power losses are of the order of 6.2%. Orig. art. has: 16 formulas, 4 figures, and 2 tables. [98]

ASSOCIATION: Fizicheskiy institut im. P.N. Lebedeva AN SSSR (Physics Institute, AN SSSR)

SUBMITTED: 00 ENCL: 00 SUB CODE: AA, EC

NO REF SOV: 009 OTHER: 001 ATD PRESS: 4006

me

Card 2/2

L 52039-65 FBD/EWT(l)/EWG(v)/EEC-4/EEC(t)/T/FCS(k) Pe-5/Pac-4/Pae-2/
Pi-4/Pj-4/Pl-4 GW/WS-4/WR
ACCESSION NR: AT5012809 UR/2504/65/028/000/0116/0128

57
56
B+1

AUTHOR: Salomonovich, A. Ye.; Braude, B. V.; Yesepkina, N. A.

TITLE: 10. Measurements in the near zone of the parameters of highly directional antennas 25B

SOURCE: AN SSSR. Fizicheskiy institut. Trudy, v. 28, 1965. Radioteleskopy (Radio telescopes), 116-128

TOPIC TAGS: directional antenna, near zone, antenna parameter, antenna amplification, antenna scattering coefficient, antenna lobe width, radiotelescope, parabolic antenna 12

ABSTRACT: The ratio of the linear dimensions of the antenna opening to the wavelength is so large in modern radioastronomical instruments that the use of ordinary methods of antenna measurement carried out in the far zone would require a positioning of the auxiliary equipment beyond the horizon. Likewise, the dimensions of the necessary thermal radiation sources become prohibitively large (V. S. Troitskiy, N. M. Tseytlin, Izv. vuzov. Radiofizika, 1960, 3, 667; 1961, 4, 391). Use of artificial cosmic radiowave sources often encounters definite difficulties because, in the case of highly directional antennas, the width of the main lobe of the measured antenna diagram should be larger than the "visible" angular

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L 52039-65
ACCESSION NR: AT5012809

dimensions of the cosmic source serving as the emitter in the far zone. The present paper investigates the feasibility of near zone measurements of the side lobes and amplification coefficients of highly directional parabolic antennas whose diagrams have a width on the order of a few minutes. During the comparison of the directivity diagrams measured in the far and near zones the authors arrived at an expression which, as they found out after submitting their paper for publication, is for all practical purposes identical with the expression published earlier by J. J. Stangel and W. M. Yarnell (IRE Int. Conv. Rec., 1962, Pt. 1, 3). They also outline a method for the measurement of antenna amplifications using cosmic sources whose dimensions exceed the width of the main lobe (whose size was determined by preliminary measurements within the near zone). These methods are illustrated by the results of measurements (using the Moon as the source) of the amplification of the antenna of the 22-meter RT-22 radiotelescope carried out by FIAN in the millimeter wave band. Orig. art. has: 40 formulas and 4 figures.

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva Akademii nauk SSSR (Physics Institute of the Academy of Sciences, SSSR)

SUBMITTED: 00 ENCL: 00 SUB CODE: AA, EC

NO REF SOV: 014 OTHER: 000

Card 2/2

SALOMONOVICH, A.Ye., doktor fiziko-matematicheskikh nauk

Recent developments in lunar and planetary studies. Vest. AN SSSR 35 no.10:102-109 O '65. (MIRA 18:10)

L 45081-65 FBD/EWT(1)/EWG(v)/EEC-4/EEC(t) Po-4/Pe-5/Pae-2/P1-4 GW/WS-4

ACCESSION NR: AP5010433 UR/0033/65/042/002/0390/0397

43
42
B

AUTHOR: Losovskiy, B. Ya.; Salomonovich, A. Ye.

TITLE: The radio emission and differences in the surface matter of the lunar seas and continents

SOURCE: Astronomicheskiy zhurnal, v. 42, no. 2, 1965, 390-397

TOPIC TAGS: lunar sea, lunar continent, lunar surface, lunar radio emission, Mare Serenitatis, lunar crater

ABSTRACT: This paper describes the methods used for relative measurements of the brightness contrasts of the radio emission from the different regions of the lunar disk; it represents a continuation of investigations made over a period of years and already described in the literature. The authors present the results of measurement of the contrasts of radio emission from the lunar seas and continents, observed with the RT-22 radio telescope of the Physics Institute, Academy of Sciences USSR, at 8 mm. The observations of 1963 were made in two regions on the moon, close in longitude and latitude. The continental region was at $\theta = +22°$, $\Psi = -22°$, near Sacrobosco Crater, and the observed lunar sea area was at $\theta = +18°$, $\Psi = +22°$, in the Mare Serenitatis.

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L 45081-65

ACCESSION NR: AP5010433

The measurements revealed that there was a relatively small difference of brightness temperature during the period of lunation, averaging 1.5±0.5%. The amplitude of the periodic variations of contrast did not exceed 3%. It can be concluded that the characteristics of the upper layers of the seas and continents are quite similar. The excess of the nighttime temperature of the sea surface in the Mare Serenitatis over the corresponding temperature of the continental region near Sacrobosco Crater was about 8C, indicating a difference in the parameter $\gamma = (k\rho c)^{-1/2}$ for the matter of these regions of about 25%. These measurements suggest that the surface layer of the moon can be considered quasi-homogeneous. For more precise determinations of the degree of nonhomogeneity, it is recommended that measurements be made at about 2 cm. "The authors wish to thank N.F. Il'in, A.N. Kozlov and B.G. Kutuza for assistance in the observations and preparation of the apparatus." Orig. art. has: 14 formulas and 1 figure. [08]

ASSOCIATION: Fizicheskiy institut im. P.N. Lebedeva Akademii nauk SSSR (Physics Institute, Academy of Sciences, SSSR)

SUBMITTED: 13Jun64 ENCL: 00 SUB CODE: AA, EC

NO REF SOV: 011 OTHER: 003 ATD PRESS: 3255

am

Card 2/2

L 57062-65 FBD/EWT(1)/EWG(v)/EEC-4/EEC(t) Pe-5/Pi-4/Pae-2 WS-4/GW

ACCESSION NR: AP5015580 UR/0030/65/042/003/0527/0530
523.164.42

AUTHOR: Barret, A. Kh.; Kutuza, B. G.; Matveyenko, L. I.; Salomonovich, A. Ye.

TITLE: Observations of radio emission sources at the 3.3- and 0.8-cm wavelengths

SOURCE: Astronomicheskiy zhurnal, v. 42, no. 3, 1965, 527-530

TOPIC TAGS: radio emission source, Taurus A, source 3C 84, source 3C 273, source 3C 279, radio emission

ABSTRACT: Results of observations carried out with the 22-m radio telescope of the Physics Institute imeni. P. N. Lebedev AN SSSR are discussed. The observations were made to explain the presence of a second radio-emission source in the Taurus constellation, to investigate the brightness distribution of Taurus-A source at the 8-mm wavelength, and to measure the fluxes of sources 3C 84, 3C 273 and 3C 279 at the 3.3-cm and 8-mm wavelengths. With the exception of observations dealing with the brightness distribution of Taurus-A, the observations consisted in recording the curves of the transit of sources through the radiation pattern of a stationary radiotelescope antenna at time constants of 5^s and 4^s for the 3.3-cm and 8-mm wavelengths respectively. The time constants were determined by the widths of the radiation

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ACCESSION NR: AP5015580 2

patterns which were 5.9' and 2'. The fluxes were calculated under the assumption of the Gaussian distribution of brightness temperature and of the Gaussian shape of the antenna pattern. The results of these calculations are shown in Table 1 of the Enclosure. The flux at the 8-mm wavelength of the source located about 36^{s} to the east of Taurus-A proved to be not more than 5% of the Taurus-A flux. The results of the measurements of 3C 84, 3C 273, and 3C 279 confirm their reported anomalously high fluxes at centimeter wavelengths. The estimates of the upper limits of the fluxes at 8-mm agree with this conclusion. The results of measurements of the dimensions of Taurus-A at 8-mm can be approximated by an ellipse with axes 4.2' ±0.2' and 2.9' ±0.2' with the major axis at a position angle of 140°. Orig. art. has: 2 figures and 1 table. [DW]

ASSOCIAITON: *Issledovatel'skaya laboratoriya elektroniki Massachusetskogo tekhnologicheskogo instituta Kembridzh, Massachusets, SShA (Electronics Research Laboratory, Massachusetts Institute of Technology, Cambridge, Massachusetts, SShA), Fizicheskiy institut im. P. N. Lebedeva Akademii nauk SSSR (Physics Institute Academy of Sciences SSSR), Institut radiotekhniki i elektroniki Akademii nauk SSSR (Institute of Radio Engineering and Electronics, Academy of Sciences SSSR)

SUBMITTED: 04Jan65	ENCL: 01	SUB CODE: EC
NO REF SOV: 004	OTHER: 005	ATD PRESS:

Card 2/3

L 57062-65

ACCESSION NR: AP5015580 ENCLOSURE: 01

Table 1.

sources	Flux x 10^{26} m^{-2} cps^{-1}		angulon size	no. of passages	
	λ=3.3	λ=8 mm	λ = 8.3 cm	3.3 cm	8 mm
3C 84	22±2	<90	<20"	28	8
3C 273	26±2	<50	—	15	15
3C 279	14±1.5	—	<20".	13	—
Taurus-A	[560]	600±60	—	—	52

dm

Card 3/3

L 53994-65 FBD/EWT(1)/EWG(v)/EEC-4/EEC(t) Pe-5/Pae-2/Pi-4 GW/WS-4

ACCESSION NR: AP5012759 UR/0020/65/161/006/1301/1302

47
45
B

AUTHOR: Kutuza, B. G.; Losovskiy, B. Ya.; Salomonovich, A. Ye.

TITLE: Saturn radio emission at the 8-mm wavelength

SOURCE: AN SSSR. Doklady, v. 161, no. 6, 1965, 1301-1302

TOPIC TAGS: Saturn radio emission, radio emission measurement, Jupiter radio emission

ABSTRACT: In July and August 1964, measurements of the brightness temperature of Saturn at 8 mm were carried out with the 22-m radiotelescope of FIAN, equipped with a standard modulation radiometer for the 8-mm wavelength. To eliminate errors in determining the antenna parameters, Jupiter radio emission was recorded at the same time. The brightness temperature of Jupiter with respect to the optically visible disk was assumed to be 144K. Recordings of the azimuth transit of both planets were made in conjunction with visual tracking along the zenith path. In averaging the series of records, fading in the Earth's atmosphere and the reduction of the output signal due to the effect of the radiometer time constant were taken into consideration. The antenna temperature and amplification stability control

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L 53994-65
ACCESSION NR: AP5012759

2

were calibrated with a gas-discharge noise generator. In all, 36 recordings of Saturn passage were processed. The arithmetic mean value of brightness temperature of the Saturn disk (without the ring) on the basis of 24 recordings of 22 July 1964 was 129K; on the basis of 12 recordings of 21 August 1964, the value was 144K. The weighted mean value at 8 mm was 132±9K, which is consistent with temperatures that have been previously reported at 3 cm, 10 cm, and infrared wavelengths; thus there is some evidence pointing to a radiation belt about Saturn, although not as pronounced as that of Jupiter. Orig. art. has: 2 figures. [KM]

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva Akademii nauk SSSR (Physics Institute, Academy of Sciences SSSR); Institut radiotekhniki i elektroniki Akademii nauk SSSR (Institute of Radio Engineering and Electronics, Academy of Sciences SSSR)

SUBMITTED: 23Nov64 ENCL: 00 SUB CODE: EC, AA

NO REF SOV: 002 OTHER: 008 ATD PRESS: 4021

Card 2/2

L 17703-66 FBD/EWT(1) GW/WS-2
ACC NR: AP6006790 SOURCE CODE: UR/0033/66/043/001/0236/0237

AUTHOR: Kutuza, B. G.; Losovskiy, B. Ya.; Salomonovich, A. Ye.

ORG: Physics Institute im. Lebedev, Academy of Sciences SSSR (Fizicheskiy institut Akademii nauk SSSR); Institute of Radio Engineering and Electronics, Academy of Sciences SSSR (Institut radiotekhniki i elektroniki Akademii nauk SSSR)

TITLE: Observations of the radio emission of Mars at 8 mm

SOURCE: Astronomicheskiy zhurnal, v. 43, no. 1, 1966, 236-237

TOPIC TAGS: Mars planet, temperature measurement, planetary atmosphere

ABSTRACT: The brightness temperature of Mars was measured at 8 mm during its opposition on 8 and 15 March 1965. In all, 57 recordings were made by means of the RT-22 radio telescope of the Physics Institute im. Lebedev, Academy of Sciences SSSR. The brightness temperature averaged over the disk proved to be 225 ±10K. Orig. art. has: 1 figure and 1 table. [DW]

SUB CODE: 03/ SUBM DATE: 27Jul65/ ORIG REF: 001/ OTH REF: 006/ ATD PRESS: 4209

Card 1/1 UDC: 523.164.43

SALOMONOVICH, Efim Davidovich.

Drilling of small holes Moskva, Gos. izd-vo oboronnoi promyshlennosti, 1943.
78 p.

Cyr.4 TJ9

SALOMONOVICH, Ye.D., kandidat tekhnicheskikh nauk.

Shrinkage of shavings during speed cutting of 40 and 40X steel.
Trudy MNI no.11:276-285 '51. (MLRA 10:3)
(Metal cutting)

SALOMONOVICH, Ye.D., kandidat tekhnicheskikh nauk, dotsent.

Cutting temperature in speed cutting of 40X and 40 steel using cutting tools fitted with T 15K6 hard alloy blades . Trudy MNI no.11:286-294 '51. (MLRA 10:3)
(Metal cutting) (Cutting tools)

USSR/Engineering - Metal cutting

Card 1/1 : Pub. 128 - 12/38

Authors : Salomonovich, E. D.

Title : Investigating temperature in working metal at high cutting speeds

Periodical : Vest. mash. 9, 45-46, Sep 1954

Abstract : Temperatures in the cutting of steels and non-ferrous metals with carbide-tipped tools were measured in a simple thermocouple set-up at cutting speeds between 40 and 2000 M/min. It was found that the temperature at the cutting edge approaches asymptotically the melting temperature of the metal. Four USSR references (1948-1951). Graph; drawings.

Institution : .....

Submitted : .....

Salomonovich, E.D.

USSR/ Engineering - Tools

Card 1/1 Pub. 128 - 13/34

Authors : Salomonovich, E. D.

Title : A device resulting in a multi-fold reduction of the cutting operation at high speeds

Periodical : Vest. mash. 12, 48-51, Dec 1954

Abstract : A description is presented of a device employed on turning lathes which results in a multi-fold decrease in a metal-cutting operation at high speeds (2,000 m/min.). Illustration and drawing depicting the above mentioned device are presented, together with tables and graphs giving technical specifications. Diagrams.

Institution : .....

Submitted : .....

SALOMONOVICH, Ye.D., kandidat tekhnicheskikh nauk.

Surface smoothness of parts machined at cutting speeds up to 2000meters per minute.Trudy MNI no.17:184-186 '56. (MLRA 9:10)

(Metal cutting)

88652

S/123/61/000/001/010/015
A005/A001

1.1100

Translation from: Referativnyy zhurnal, Mashinostroyeniye, 1961, No. 1, p. 40, # 1B341

AUTHOR: Salomonovich, Ye. D.

TITLE: The Cutting Temperature at High-Speed Processing

PERIODICAL: V sb.: "Teplovyye yavleniya pri obrabotke metallov rezaniyem". Moscow, 1959, pp. 135-143, 8

TEXT: Results are presented from an investigation of the cutting temperature at processing the steel 3, 40X (40Kh), cast iron, and nonferrous metals on a lathe of the firm "Sherer". For determining the temperature in the cutting zone, the artificial thermocouple method was used. The cutters with T15K6 (T15K6) and T60K6 (T60K6) hard alloy tips had the following geometrical characteristics: $\gamma = 0^\circ$; $\alpha = \alpha_1 = 10^\circ$; $\lambda = 3^\circ$; $\varphi = 45^\circ$; $\varphi_1 = 10^\circ$; $r = 0.8 - 1$ mm. The cutting depth of 1 mm and the feed of 0.12 mm/rev were constant in all tests. One failed to determine the effect of the tool material on the cutting temperature. The curve obtained for the correlation of cutting temperature vs. cutting speed is divided into three sections, each of which is characterized by an individual rise in temperature. In the processing of nonferrous metals, an intense rise of

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The Cutting Temperature at High-Speed Processing

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temperature was stated up to v= 100 - 200 m/min, at v = 200 - 400 m/min the temperature increased mor slowly, and at v = 600 - 1,000 m/min, the cutting temperature approached the material melting point. At the processing of steel and cast iron with v up to 100 m/min, the temperature intensely increased, then its rise became slower, and at 750 - 2,100 m/min, the temperature rise was insignificant. - There are 4 figures and 8 graphs.

I. Briskman

Translator's note: This is the full translation of the original Russian abstract.

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SOV/96-58-11-12/21

AUTHOR: Isachenko, V.P., Candidate of Technical Science
Salomzoda, F.

TITLE: Heat Transfer and Hydraulic Resistance of a Tube Bundle With Square Arrangement in a Transverse Flow of Water (Teplootdacha i gidravlicheskoye soprotivleniye poperechno omyvayemogo vodoy koridornogo puchka trub)

PERIODICAL: Teploenergetika, 1958, Nr 11, pp 69-71 (USSR)

ABSTRACT: Previous work, published in Teploenergetika 1955, No.8, on the heat transfer of two bundles with square and honeycomb arrangement using water and transformer oil is briefly described. Later modifications to the apparatus are discussed. Further work was done with water in the range of Reynolds numbers from 600 to 10^5. Determinations were made of mean heat-transfer and hydraulic resistance in a bundle of seven rows of tubes with square arrangement, as illustrated diagrammatically in Fig.1. The tubes were of copper and had an external diameter of 10 mm. The central tubes cross-hatched in Fig.1, could be removed from the bundle or moved from row to row without

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Heat Transfer and Hydraulic Resistance of a Tube Bundle With Square Arrangement in a Transverse Flow of Water

dismantling the working chamber. The formula used to work out the test data is given. The heat transfer results obtained are plotted in Fig.2. The tests were made with heat flow in both directions (heating and cooling). A formula is given that represents the heat transfer of the first row of tubes. In Fig.3, curve 1 represents heat transfer of tube bundles with square arrangement over a wide range of Reynolds numbers derived from previously published works. The results for Reynolds numbers below 700 are taken from the work of Bergelin and others. Fig.3, also includes the data of Fig.2 for the fifth and first rows. It follows from Fig.3, that for comparatively low values of Reynolds numbers the present results are in good agreement with other published work. In the transitional region, covering the range of Reynolds numbers from 600 to 20 x 10^3, the law of heat transfer is more complicated than for higher values of

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Heat Transfer and Hydraulic Resistance of a Tube Bundle With Square Arrangement in a Transverse Flow of Water

Reynolds numbers. Comparatively sharp variations in heat transfer rates are to be expected in the transitional region. However, insufficient material is available yet to permit of definite conclusions being drawn. It is probable that in practical equipment heat transfer will be represented by previously published equations with some limitations. There are 4 figures and 4 Soviet references.

ASSOCIATION: Moskovskiy energeticheskiy institut (Moscow Power Institute)

Card 3/3

96527

Z/009/60/010/02/022/026
E142/E235

5.3832

AUTHORS: Zámorský, Z., Saloň, F., and Veselý, R

TITLE: The Effect of the Composition of Copolymers on the Change of Constant k'

PERIODICAL: Chemický Průmysl, 1960, Vol 10, Nr 2, pp 108-110

ABSTRACT: The size of polymer molecules is often characterised by the limiting viscosity number (η); the latter is calculated according to the Huggins equation. The value k' corrects deviations from Stokes' Law. k' is not only a thermodynamic parameter, but also the factor expressing the interaction of the systems "polymer-polymer" and "polymer-solvent"; it was used as a criterion to define changes during the interaction of the aforementioned systems at changing composition of the copolymer but when using the same solvent. Various copolymers of ethylene terephthalate and furandi carboxylic acid were tested; they were prepared by polycondensation of 2,2'-dihydroxyethylene esters. A mixture of phenol and 1,1,2,2-tetrachlorethane was used as solvent. The samples (in the form of fibres) were dissolved in 50 ml of a solvent for 30 minutes at 80°C.

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Z/009/60/010/02/022/026
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The Effect of the Composition of Copolymers on the Change of Constant k'

The relation between the limiting viscosity number (η) and the composition of the copolymer is shown in a graph (Fig 1) and values for η and the constant k' of the polymer compared (Table 1). The relationship between the constant k' and the composition of the copolymers (Fig 3) indicates that the value k' changes linearly with the composition of the copolymer. The influence of the systems "polymer-polymer" and "polymer-solvent" in the given solvent appears to be an additive function of the structure of the polyester chain. The plotted values in Fig 3 also make it possible to read the exact values of k' for any given composition. There are 3 figures, 1 table and 6 references, 3 of which are English and 3 Czech.

ASSOCIATION: Výzkumný ústav gumárenské a plastikářské technologie, Gottwaldov (Research Institute for Rubber and Plastics Technology, Gottwaldov)

SUBMITTED: September 4, 1959

Card 2/2

KONDRACKI, Jerzy, prof. dr (Warszawa); SALONI, Janina, mgr (Warszawa)

Report on the activities of the Polish Geographical Society for the year 1961. Czasop gragraf 34 no.2:197-201 '63.

1. Przewodniczacy Zarzadu Glownego (for Kondracki). 2. Sekretarz Generalny (for Saloni).

KONDRACKI, [illegible] prof. dr; SALONI, Janina, mgr

Report of the activities of the Polish Geographical Society for 1963. Czasop geograf 36 no.2:221-227 '65.

1. Chairman of the Executive Board of the Polish Geographical Society, Warsaw (for Kondracki). 2. Secretary General of the Polish Geographical Society (for Saloni).

GALON, R. prof. dr; SALONI, Janina, mgr

Minutes of the General Meeting of the Polish Geographical Society held in Torun, September 14, 1963. Czasop geograf 36 no.2:228-232 '65.

1. N.Copernicus University, Torun (for Galon). 2. Secretary General of the Polish Geographical Society, Warsaw (for Saloni).

SALONI, KAZIMIERZ

Uprawa owsa w swietle doswiadczen polskich. (Wyd. 1) Warszawa, Panstwowe Wydawn. Rolnicze i Lesne, 1956. 96 p. (Biblioteka agronoma) (Oat cultivation in the light of Polish expreiences. 1st ed.)

DA Not in DLC

SO: Monthly List of East European Accessions (EEAL) Lc. Vol. 6, No. 10, October 1957. Uncl

BODEA, Cornel; NICOARA, Elena; SALONTAI, Tamara

Eschscholtzxanthone a new carotenoid with retrostructure from the Taxus baccata fruit. Rev chimie Roum 9 no.8/9:517-521 Ag-S '64.

1. Laboratory of Chemistry, Institute of Agriculture, Cluj.

BODEA, Cornel; NICOARA, Elena; SALONTAI, Tamara

Eschscholtzxanthone, a new carotenoid with retrostructure in the Taxus baccata fruit. Studii cerc chim 13 no.8/9:553-557 Ag-S '64.

1. Laboratory of Chemistry of the "Dr. Petru Groza" Agronomic Institute, Cluj, 3 Mihastur Street.

SALONTAJ, N.

"Distribution Of Bundles Of Goods In Vinkovci" p. 228. (Zeleznice, Vol. 9, no. 7, July, 1953, Beograd.)

SO: Monthly List of East European Accessions, Library of Congress, September 1953; Vol. 2, No. 9, Uncl.

SALONTAJ, N.

"Terms in transport and commercial service." (p. 53)
ZELEZNICE. (Jugoslovenske zeleznice) Beograd. Vol. 10, no. 2, Feb. 1954

SO: East European Accessions List. Vol. 3, No. 8, August 1954

SALONTAJ, N.

TECHNOLOGY

SALONTAJ, N. Railroad scales. p. 29

Vol. 14, no. 11, Nov. 1958

Monthly List of East European Accessions (EEAI) LC, Vol. 8, no. 3
March 1959 Unclass

SALOP, L. I. PA 3/50T31

USSR/Geology - Tachylites Sep/Oct 49
Fusion, Rock

"Pseudo-Tachylites From Pribaykal'ye' and the Western Transbaykal and the Problem of Their Genesis," L. I. Salop, 17 pp

"Iz Ak Nauk SSSR, Ser Geol" No 5

Describes pseudo-tachylites. Proves they were created as a result of fusion of rocks under tectonic tension. Discusses necessary conditions and characteristics of this fusion process.

[redacted] 3/50T31

SALOP, L.I.

Metamorphism of mineral aggregates in pyritized strata in the northern part of the Baikal mountain region. Izv.AN SSSR Ser.geol. no.1:40-54 Ja-F '54. (MLRA 7:3)
(Baikal mountain region--Geochemistry)
(Geochemistry--Baikal mountain region)

SALOP, L. I.

SHATSKIY, N.S.; BOGDANOV, A.A.; BELYAYEVSKIY, N.A.; VERESHCHAGIN, V.I.; ZAYTSEV, N.S.; KOSYGIN, Yu.A.; KROPOTKIN, P.N.; MURATOV, M.V. NAGIBINA, M.S.; OGNEV, V.N.; PAVLOVSKIY, Ye.V.; PEYVE, A.V.; PUSHCHAROVSKIY, Yu.M.; SALOP, L.I.; SOBOLEVSKAYA, V.N.; KHARITONOV, L.Ya.; KHERASKOV, N.P.; SHEYNMAN, Yu.M.; SHTREYS, N.A.; YANSHIN, A.L.; VERSTAK, G.V. redaktor izdatel'stva; GUROVA, O.A. tekhnicheskiy redaktor

[Tectonic map of the U.S.S.R. and adjacent countries on a scale of 1:5,000,000; explanatory notes] Tektonicheskaia karta SSSR i sopredel'nykh stran v masshtabe 1:5,000,000; ob"iasnitel'naia zapiska. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po geol. i okhrane nedr, 1957. 77 p. (MLRA 10:5)

1. Akademiya nauk SSSR.
(Russia--Geology--Maps)

20-118-4-49/61

AUTHORS: Salop, L. I., Golovenok, V. K., Zhidkov, A. Ya. Shalek, Ye. A.

TITLE: On the Age of the Last Geosyncline Folding in the Baykal Upland (O vozraste posledney geosinklinal'noy skladchatosti v Baykal'skom nagor'ye)

PERIODICAL: Doklady Akademii Nauk SSSR, 1958, Vol. 118, Nr 4, pp. 800-802 (USSR)

ABSTRACT: There are various standpoints concerning the age of this period of folding since the layers in question already belong to the Meso-Cainozoicum and are scarcely dislocated (ref. 1-4). The investigations of the authors on the edge of the upland in question have confirmed the opinion that the last stage of the geosyncline development took place at the boundary between middle-and upper-Cambrian. It is completely justified to speak of a Pribaykal'skiy front flexure from upper Cambrian in which strangely colored red molasse sediments (molassovyye) were accumulated. The formation of these masses had to take place simultaneously with great tectonic movements

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within the mentioned upland. These movements are dated by a discordance between Cm_1 and Cm_3. However, the time of the fold formation has to be restricted to the interval between Cm_2 and Cm_3 if the geological data of the inner districts of the upland are taken into account where the middle Cambrian sediments take part in the fold formation together with the lower Cambrian. The tectonic phase was, however, obviously not so much limited with respect to time. Many researchers (ref.12) are of opinion that the age of the fold formation can be determined more precisely only according to the time of the formation of the conglomerates of the sole, and not according to the discordance. The sediments of the Verkholenskaya suite of the mentioned front flexure must be counted among such formations. This upper-Cambrian suite rests discordantly upon the carbonate mass of lower-Cambrian in the districts of the Siberian platform which border on the Baykal upland. This fact has served as basis for the above mentioned conclusion (ref.4) concerning the last stage of the geosyncline development of the upland between

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On the Age of the Last Geosyncline Folding in the Baykal Upland

middle- and upper - Cambrian. This folding apperently began after middle-Cambrian and was continued in upper-Cambrian. The low folding of the Verkholenskaya suite is a proof. The last stage of the movements is fixed by a great marine transgression. There are 12 **Soviet references.**

ASSOCIATION: **All-Union** Scientific Geological Research Institute (Vsesoyuznyy nauchno-issledovatel'skiy geologicheskiy institut)

PRESENTED: June 19, 1957, by A.A. Polkanov, Member AN SSSR

SUBMITTED: June 17, 1957

AVAILABLE: Library of Congress

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DZEVANSKIY, Yu.K.; DODIN, A.L.; KONIKOV, A.Z.; KRASNYY, L.I.; MAN'KOVSKIY, V.K.; MOSHKIN, V.N.; LYATSKIY, V.B.; NIKOL'SKAYA, I.P.; SALOP, L.I.; SALUN, S.A.; RABKIN, M.I.; RAVICH, M.G.; POSPELOV, A.G.; NIKOLAYEV, A.A.; IL'IN, A.V.; BUZIKOV, I.P.; MASLENNIKOV, V.A.; NEYELOV, A.N.; NIKITINA, L.P.; NIKOLAYEV, V.A.[deceased]; OBRUCHEV, S.V.; SAVEL'YEV, A.A ; SEDOVA, I.S.; SUDOVIKOV, N.G.; KHIL'TOVA, V.Ya.; NAGIBINA, M.S.; SHEYNMANN, Yu.M.; KUZNETSOV , V.A.; KUZNETSOV, YU.A.; BORUKAYEV, R.A.; LYAPICHEV, G.F.; NALIVKIN, D.V., glav. red.; VERESHCHAGIN, V.N., zam. glav. red.; MENNER, V.V., zam. glav. red.; OVECHKIN, N.K., zam. glav. red.[deceased]; SOKOLOV, B.S., red.; SHANTSER, Ye.V., red.; MODZALEVSKAYA, Ye.A., red.; CHUGAYEVA, M.N., red.; GROSSGEYM, V.A., red.; KELLER,B.M., red.; KIPARISOVA, L.D., red.; KOROBKOV, M.A., red.; KRASNOV, I.I., red.; KRYMGOL'TS, T.Ya., red.; LIBROVICH, L.S., red.; LIKHAREV, B.K., red.; LUPPOV, N.P., red.; NIKIFOROVA, O.I., red.; POLKANOV, A.A., red.[deceased]; RENGARTEN, V.P., red.; STEPANOV, D.L., red.; CHERNYSHEVA, N.Ye., red.; SHATSKIY, N.S., red.[deceased]; EBERZIN, A.G., red.; SMIRNOVA, Z.A., red.izd-va; GUROVA, O.A., tekhn. red.

[Stratigraphy of the U.S.S.R. in fourteen volumes. Lower Pre-Cambrian] Stratigrafiia SSSR v chetyrnadtsati tomakh. Nizhnii Dokembrii. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po geologii i okhrane nedr. Pt. 1 (ASIATIC PART OF THE USSR) 1963. 396p.

S/210/63/000/001/001/003
E195/E155

AUTHOR: Salop. L.I.

TITLE: The geological interpretation of data obtained by the argon method for the determination of the absolute rock age

PERIODICAL: Geologiya i geofizika, no.1, 1963, 3-21

TEXT: The degree of retention of argon for various types of rock structures was studied in order to determine the suitability of the argon method for determination of the absolute rock age. Argon escapes from rocks not only during intensive metamorphism, causing their recrystallization, but also as a result of crypto-metamorphism, i.e. invisible or hardly perceptible changes in the crystal lattice of minerals under the influence of comparatively low temperatures, pressure (gravitational compression) and deformation. Replacement, especially potassium metasomatism, perthitization of feldspars, and weathering also affect the retention of argon. Thus, the data obtained by means of the argon method do not give the absolute age of deep-seated rocks, but the time of termination of the influence on these rocks of the

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OBRUCHEV, S.V., otv. red.; VELIKOSLAVINSKIY, D.A., red.; KELLER, B.M., red.; KRATS, K.O., red.; NEYELOV, A.N., red.; PAVLOVSKIY, Ye.V., red.; POLOVINKINA, Yu.Ir., red.; SEMENKO, N.P., red.; SALOP, L.I., red.

[Pre-Cambrian geology] Geologiia dokembriia. Moskva, Nedra, 1964. 284 p. (Its Doklady sovetskikh geologov. Problema 10) (MIRA 17:8)

1. International Geological Congress. 22d, 1964.

SPIZHARSKIY, T.N.; GROMOV, Yu.Ya.; Prinimali uchastiye: BOROVIKOV, L.I.; BORSUK, B.I.; GORETSKAYA, Ye.N.; ZUBTSOV, Ye.I.; SALOP, L.I.; SHTAL', M.V.

Paleotectonic maps and the methods for plotting them. Metod. paleogeog.issl. no.1:228-247 '64. (MIRA 18:6)

SALOP, Lazar' Iosifovich; KIRICHENKO, G.I., red.

[Geology of the Baikal mountain region] Geologiia Baikal'-skoi gornoi oblasti. Moskva, Izd-vo "Nedra." Vol.1. [Stratigraphy] Stratigrafiia. 1964. 515 p. (MIRA 17:7)

BEREZIN, Mikhail Timofeyevich; SALOPANOV, A.G., red.; OSADA, P.A., red. izd-va; KARASEV, A.I., tekhn.red.

[Organizing the preparation of ferrous scrap metal; aid to representatives of the Trust for the Procurement and Processing of Secondary Metals] Organizatsiia zagotovki loma chernykh metallov; v pomoshch' upolnomochennym Vtormeta i rabotnikam predpriiatii, zanimaiushchimsia sborom, pererabotkoi i otgruzkoi loma. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1960. 177 p. (MIRA 14:1)
(Scrap metals)

SALOPEK, Marijan, dr.,prof., akad. (Zagreb, Vlaska 70b)

Geologic investigations in the northwestern part of Vinodol. Ljetopis JAZU 63:380-382 '56 (publ.'59).

1. Prirodoslovno-matematicki fakultet Sveucilista u Zagrebu: tajnik III odjela za prirodne nauke Jugoslavenske akademije znanosti i umjetnosti.

SALOPEK, Marijan

Geologic structure of the Paleozoic breakthrough in the environs of Gerovo. Acta geol JAZU 3:99-105 '61.

Geologic relations of the Paleozoic bre kthrough in the [illegible] of Smrecje, Trsce, and Cabar, Gorski Kotar District. Ibid:,243-252.

SALOPEK, M.

Determination of Paleogene and the deep-sea deposits of Eocene in the Scaglia facies along the Montenegrin shores" by [Zavod za geol.-istrazivanja NR Crne Gore, Titograd] M.Canovic. Reviewed by M. Salopek. Bul sc Youg 7 no.3:78 Je '62.

1. Rédacteur d'extraits, "Bulletin scientifique."

SALOPEK, M.

"Geology of the greater area of Tomasevo (Sahovici) in Montenegro" by [Zavod za geol. istrazivanja NR Srbije, Beograd] D. Rubezanin. Reviewed by M. Salopek. Bul sc Youg 7 no.1/2:24 F-Ap '62.

1. Rédacteur d'extraits, "Bulletin scientifique."

SALOPEK, M.

"Geology" by [Zavod za geol. i geof. istrazivanja NR Srbije, Beograd] B. Ciric, S. Mojsilovic, Z. Dordevic, and S. Nesic; and [Rudarsko-geoloski fakultet, Beograd] B. Milovanovic, and S. Karamata. Reviewed by M. Salopek. Bul sc Youg 8 no. 1/2: 42-44 F-Ap '63.

1. Membre de la Redaction and redacteur d'extraits, "Bulletin scientifique."

KONEV, S.V.; SALOSHENKO, P.N.

Effect of urea on the accuracy of the luminescent express method for determining protein in milk. Dokl. AN BSSR 7 no.10:696-699 O '63. (MIRA 16:11)

1. Laboratoriya biofiziki i izotopov AN BSSR. Oredstavkebi akademikom AN BSSR T.N. Godnevym.

KOMEV, S.V.; LYSKOVA, T.I.; SALOSHENKO, P.N.

Accuracy in determining protein in selected milk samples by the luminescence method. Dokl. AN BSSR 8 no. 1:51-52 Ja '64. (MIRA 17:5)

1. Laboratoriya biofiziki i izotopov AN BSSR. Predstavleno akademikom AN BSSR T.N.Godnevym.

SALOSHENKO, P.N.

Feeding of amplifiers of SF-4 and SF-5 spectrophotometers. Prib. i tekh. eksp. 9 no.1:224 Ja-F '64. (MIRA 17:4)

1. Laboratoriya biofiziki i izotopov AN BSSR.